QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# VitalScreen™ S

## 17" Medical Certified Display

## VSS17SX / VSS17SX-TR

Operations Manual

www.planar.com

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

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# Contents

Regulatory Compliance . . . . . iv
Product Information . . . . . vi

**1 Learning Display Features**
About the VitalScreen S . . . . . 1
Unpack the Display . . . . . 2
Identify the Components . . . . . 3
Adjust the Orientation/Viewing Angle . . . . . 5

**2 Installing the Display**
Connect the AC Power . . . . . 6
Connect the Video Cable . . . . . 7
Connect the Audio Cable . . . . . 8
Connect the Optional Touch Screen . . . . . 9
Power Management System . . . . . 10

**3 Using Display Controls**
Overview of Controls . . . . . 11
Hot Key Functions . . . . . 12
Onscreen Display Main Menu . . . . . 13
Function Menus . . . . . 14

**Appendix A: Technical Information** . . . . . 18
**Appendix B: Supported Timing** . . . . . 19
**Appendix C: Troubleshooting** . . . . . 20

**Index** . . . . . 21

**Overview of Standard Warranty** . . . . . 23

**Ordering Information** . . . . . 26

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Regulatory Compliance

This display has been tested and certified to international medical safetystandards IEC/EN 60601-1 and IEC/EN 60601-1-2, and is certified to meet C22.2 No. 601.1-M90 (C US Mark).

Because many medical offices are located in residential areas, the medical display, in addition to meeting medical requirements, has also been tested and found to comply with the limits for Federal Communications Commission (FCC) Class B computing devices in a typically configured system. It is the system integrator or configurer's responsibility to test and ensure that the entire system complies with applicable electromagnetic compatibility (EMC) laws.

Planar Systems, Inc. has made great efforts to support the medical device industry, in particular, medical device manufacturers and medical device system integrators. We offer state-of-the-art color displays that are compliant with worldwide accepted medical device safety standards, and for the European market, CE-marked displays based on compliance with counsel directive 93/42/EEC commonly referred to as the Medical Device Directive (MDD). The following summarizes our qualification of these displays as it relates to compliance with the MDD.

The European Medical Device Directive requires that the intended use of the device be defined. The intended use of these displays is "to display alphanumeric, graphic, and image data as inputted from any type of medical device." These displays do not provide a measurement function in any way, and it is the device and systems manufacturer's responsibility to verify its function in the integrated device or system.

The display was classified as required by the MDD according to Annex IX of the directive and the medical device (MEDDEV) guidance available at the time of classification. Because the display uses electrical energy and has no direct patient connections and—by itself—no medical utility, the display is classified according to Rule 12 as an MDD Class I device-component or accessory. The MDD states that manufacturers of Class I medical devices or accessories shall satisfy the requirements in regard to design and manufacturing controls, that is, the applicable assessment route to be used for CE-marking under the MDD, and it shall carry the CE mark according to Annex XII of the directive, with no notified body annotation.

The applicable safety standards for an MDD Class I display are IEC/EN 60601-1:1900 along with Amendments 1 and 2. To help the medical device designer evaluate the suitability of these displays, Planar has also conducted EMC testing to IEC 60601-1-2 as it can be applied. The display with its power supply alone does not represent a functional medical device. Hence, Planar configured a minimal operating system to exercise the display. The resulting data are made available to interested parties.

The data are informative data, not certification data. Certification data must be obtained by the device or system integrator according to Article 12 of the MDD titled "Particular procedure for systems and procedure packs." Paragraph 2 clearly outlines the device or system integrator's responsibility in this matter.

In summary, Planar Systems, Inc. is CE-marking these displays under the Medical Device Directive, which establishes compliance to the basic medical safety standards. However, EMC compliance can only be accomplished in the configured medical device or system and is the responsibility of the device or system manufacturer. Planar has the necessary documentation such as IEC 60601-1 notified body and other third-party test reports and certifications, a risk/hazard analysis, an essential requirements checklist, and the Planar International Electrotechnical Commission (IEC) declaration of conformity.

Planar Systems, Inc., located in Beaverton, Oregon, USA, is the manufacturer of these displays in the meaning of the directive. As required by the MDD in Article 14, Planar Systems, Inc., not residing in the European Economic Area (EEA), has a European representative, Planar Systems, Inc.—Espoo, Finland.

In the opinion of Planar Systems, Inc. registration required to put this device into commerce is the responsibility of the medical device/system manufacturer, and Planar supports this requirement by providing a European commission (EC) declaration of conformity. If Planar supplies a display to an end user, rather than a device manufacturer, it is the end user's responsibility to ensure continued compliance with the MDD of the system in which the display is integrated.

For vigilance reporting as required under Article 10 of the MDD, Planar Systems, Inc. will provide any information requested by competent authority to support any reported incident investigation by such an authority.

**European Union Declaration of Conformity for Medical Applications**

A Declaration of Conformity has been filed for this product. For additional copies of the Declaration of Conformity document, contact Planar Systems, Inc. and request document number 001-0014-12 "Declaration of Conformity."

# Product Information

## Safety instructions

Store the display in its original shipping carton when it is not in operation for extended periods of time. Use the original packing materials and carton when shipping the display.

- Do not place the display near a window. Exposing the display to rain, water, moisture, or direct sunlight can damage it.
- Do not place anything on top of the video cable. Place the cable clear of foot traffic.
- Do not apply excessive pressure to the screen. Excessive pressure may cause permanent damage to the display.
- Refer all servicing to qualified personnel to maintain your warranty. The display and power adapter units contain no user-serviceable parts.
- Do not cover or obstruct the venting holes on the back of the display.
- Make sure the display storage area has a temperature range between -20° and 65° Celsius. Storing your display outside this range could result in permanent damage.
- Do not expose the display to liquid or drop it. If the case has been damaged, the unit may pose a shock or fire hazard. Unplug the unit immediately and call customer support for assistance.
- Replace any cord or cable that is frayed or damaged with another of the same type and rating as supplied by Planar. The safety and regulatory listings and certifications are based on the cable supplied by Planar.
- Use only the power adapter that has been tested and approved for use with this display product. The power adapter must be plugged into a grounded power outlet.
- Do not use the power adapter near inflammable anesthetics.
- Disconnect the display from the mains by pulling the mains power cord/mains plug.
- Install the display near a wall outlet that is easily accessible.

## Cleaning instructions

Use only the products listed below for cleaning the display. The products differ for cleaning the screen and cleaning the plastic enclosure. Be sure you use only the specific products approved for either the screen or the enclosure.

Always apply the product to a clean nonabrasive cloth and then wipe the screen or plastic enclosure. Cleaners applied directly to the display could leak inside a non-sealed unit and cause damage. Be careful not to splash solvents on the screen or enclosure.

### To clean the screen

1. Switch the power off.
2. Dampen a clean nonabrasive cloth with 70% isopropyl alcohol.
3. Wipe the screen gently with the dampened cloth.
4. Dry the screen with a clean nonabrasive cloth to remove any residue.

### To clean the enclosure

1. Switch the power off.
2. Dampen a clean nonabrasive cloth with 70% isopropyl alcohol, or another recommended product.
3. Wipe the enclosure gently with the dampened cloth.
4. Dry the enclosure with a clean nonabrasive cloth to remove any residue.

### Recommended for screen

Use 70% isopropyl alcohol. This is the only cleaning solution approved for use on the non-touch screen (model VSS17SX) and the touch screen (model VSS17SX-TR).

Do NOT use water or solvents (such as ketone, acetone) and aromatics (such as xylene, toluene).

### Recommended for enclosure

You may also use 70% isopropyl alcohol to clean the plastic enclosure. Otherwise, use only these approved products to clean the enclosure.

- Cidex®
- Clorox Clean-Up®
- "Green soap" United States Pharmacopoeia (USP)
- Formula 409®
- Sani-Cloth® Plus
- Virustat TBQ™

Do NOT use these products on the screen.

## Symbol explanations

The symbols in this table may appear on the display or power adapter.

| Symbol | Description |
|---|---|
| | Proof of conformity to applicable European Economic Community Council directives and two harmonized standards published in the official journal of the European Communities. |
| | The product has been tested and certified by CSA to C22.2 No. 601.1-M1990. If this mark appears with the indicators "C" and "US," the product is certified for the Canadian and U.S. markets, meeting the applicable Canadian and U.S. standards. |
| | The product has been tested to comply with FCC Class B standards. |
| | The product has been tested and certified by TÜV Rheinland in accordance with EN6061-1. |
| | More information available in accompanying documents. |
| | Protective earth ground. |
| | Indoor use only. |
| | Socket for headphones. |

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# About the VitalScreen S

The architecture of the VitalScreen™ S display incorporates an AMLCD TFT flat panel that produces a clear display with low radiation emission. This technology greatly reduces the radiation-related health concerns associated with CRT monitors.

More significant, the VitalScreen S display is medically certified under UL 2601 and IEC 60601-1. These qualifications make the display suitable for use within the point-of-care medical environment.

The VitalScreen S display is versatile, ergonomic, and user-friendly. It supports most standards from 640 x 480 VGA to 1280 x 1024 SXGA. The digital controls located on the front panel allow you to easily adjust the display parameters using onscreen menus. When incorporated into a complete workstation, the display can be wall-mounted for added convenience.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Unpack the Display

Make sure you receive the following items. If any item is missing or damaged, speak with the customer support division the your sales company immediately.

- LCD screen
- Desk stand or VESA mounting plate
- Integrated VGA-VGA-audio cable
- Serial cables (VSS17SX-TR only)
- AC power adapter with 1.5-meter (5-foot) cable
- Medical-grade power cord (U.S. or European)
- CD with touchscreen driver and PDF of this manual
- EU Declaration of Conformity

### Selecting a Workspace

Before you unpack the VitalScreen S display, select a suitable workspace for the display and computer. You need a stable, level, and clean surface near a wall outlet.

Even though this display uses little power, place it in a location that allows sufficient airflow to ensure proper ventilation.

Avoid setting up the display near a window where sunlight often comes in. You will have difficulty seeing the screen with glare reflecting off the display.

# Identify the Components

The VitalScreen display provides easy access to all controls and peripheral ports. The following illustrations of the front and back panels identify the display controls and ports.

**Front panel**

**Legend**

1 LCD screen
A 17-inch diagonal AMLCD. The screen supports a maximum resolution of 1280 x 1024 (SXGA).

2 Function LEFT and RIGHT buttons
Horizontal arrows to navigate the onscreen display horizontally. Select the icons to the left or right.

3 Power ON indicator
An LED indicator that stays lit when the power is on and the display is receiving a proper video signal. The LED blinks slowly when the display is in power-saving mode.

4 Power/Menu
Power switch/Onscreen display menu.

5 Adjust PLUS and MINUS buttons
Controls to change the value of the selected icon.

6 Desk stand
Flat-surface support for the display. The stand allows you to both rotate the screen to landscape or portrait and tilt the screen to various viewing angles.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

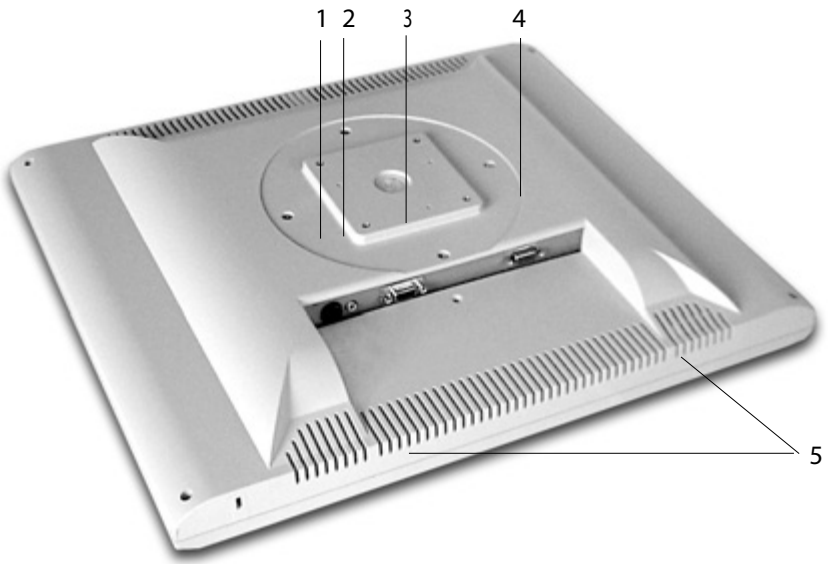
GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

## Back panel




### Legend

1 Power input port (locking mini DIN connector)
Port for the power connector.

2 Audio Line In
Jack for the audio cable. (You can also connect the CD-ROM Line Out to this jack.)

3 Touchscreen port
Port for the RS-232 cable; used to operate the optional touch screen. This cable is provided with the Optional Touch Screen package.

4 VGA connector port
Port for a 1.5-meter cable with two 15-pin D-Sub VGA connectors; used to connect the display to the VGA card in your computer.

5 Stereo speakers
Two transmission channels for sound.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Adjust the Orientation/Viewing Angle

You can rotate your VitalScreen S from landscape to portrait and tilt it to various viewing angles. The side view of the display shows the angle settings possible, ranging from -5° to 25°.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Connect the AC Power

1 Plug the AC power cord into the power adapter.

2 Plug the power connector into the locking mini DIN port on the back panel. Push the connector in until the locking mechanism clicks.

3 Plug the power cord into a grounded wall outlet.

### Installation tips

For displays mounted on a desk stand, rotate the screen from landscape to portrait for easy access to the ports. If you need to place your display face down, lower it carefully on a protective cloth to protect the screen.

### Avoiding power surges

Use a surge protector between the power adapter and the outlet to prevent sudden current variations from reaching the display.

### "Unlocking" the power cord

Press down on the plug housing and then pull out.

### IN OPERATION: No power?

Check that the display and computer are both turned on.

Verify that the outlet is functioning. Plug a lamp into the same outlet.

Check the status of the LED indicator on the power supply. If the green light is off, call customer support.

Check the status of the LED indicator on the display. If the display is on but the green light is neither steady nor blinking, call customer support.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Connect the Video Cable

1 Turn off your computer and display before connecting the two units.

2 Plug the video cable into the D-sub VGA connector port on the back panel.

3 Plug the other end of the cable into the VGA port on the computer.

4 Make sure the cable are properly aligned, then tighten the connecting screws to ensure a secure connection.

5 Turn on the display first and then the computer.

**IN OPERATION: Blank screen?**

Check the LED indicator on the display. If it is steady green, but you have no image on the screen, check that all connections are secure and the power is on. If the problem still exists, call customer support for assistance.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

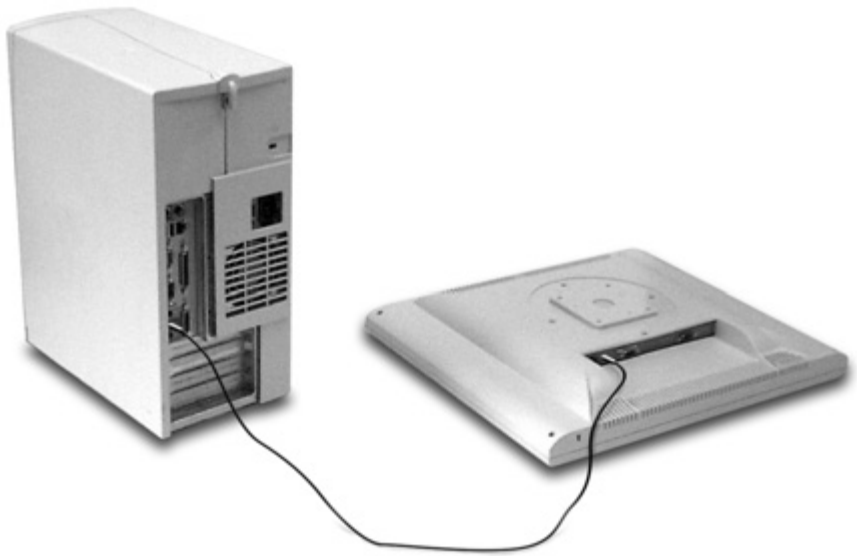
USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Connect the Audio Cable

1 Plug the audio cable to the Line Out on the audio card in your computer.

2 Plug the other end of the audio cable to the Line In jack on the display.



3 Adjust the volume of the stereo speakers by using the volume control function on the onscreen display menu.

### On volume control

In some instances, the volume control function may be disabled. If so, the volume has been preset to the maximum.

Although the display speakers are adequate for most audio applications, Planar does not recommend using the display speakers as the exclusive audio source for medical alarms or applications critical for audio performance.

### IN OPERATION: No sound?

Verify that your display unit has speakers. Try loading a CD or another audio program.

Check the volume setting on the display and the computer. Disable mute or increase the volume.

Check that the audio cable is plugged into the OUTPUT on the computer and INPUT on the display.

Plug headphones or speakers into your computer to see if they produce sound.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

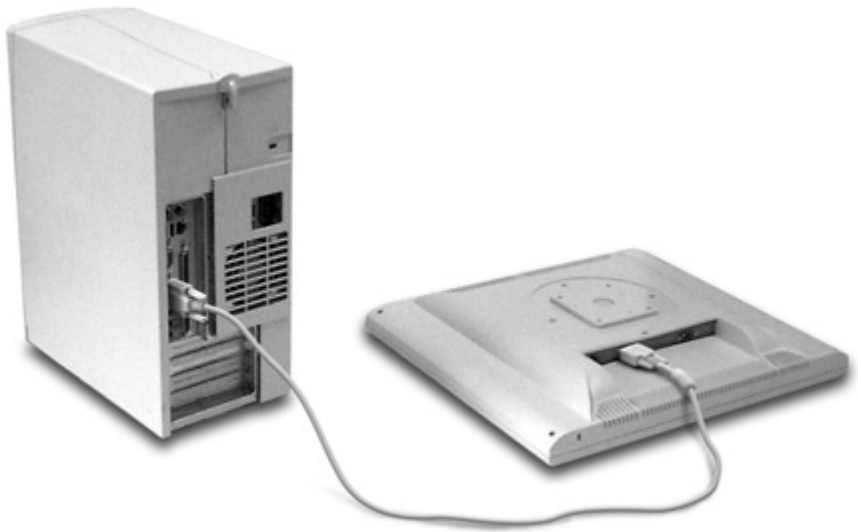
APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Connect the Optional Touch Screen

1 Plug the RS232 cable into the RS232 port on the back panel.

2 Plug the other end of the cable to the RS232 serial port on your computer.

3 Load the touchscreen driver from the CD enclosed.



**IN OPERATION: No touch?**

The CD shipped with your display contains several touchscreen drivers. Be sure the proper touchscreen driver is installed on your computer.

If you have conflicts or any problems with the driver, try reinstalling it.

If you continue to have problems, then you need to determine the source, the display or the computer. Try using the display with another computer, or installing the driver on another display.

If the problem still exists, contact customer support for assistance.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Power Management System

The VitalScreen S display complies with the VESA DPMS standard. This standard provides four power-saving modes, based on the display detecting the horizontal or vertical sync signal. The following table describes the four modes.

| Mode | | AC Input Power (including AC adapter) | LED Status |
|---|---|---|---|
| ON | with audio | 40 watts maximum | Steady green |
| | without audio | 37 watts maximum | Steady green |
| Standby | | 5 watts maximum | Blinking green |
| Suspend | | 5 watts maximum | Blinking green |
| OFF | | 5 watts maximum | OFF |

When the display is in power-saving mode, or when it detects an incorrect timing, the display screen goes blank and the power LED indicator blinks.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

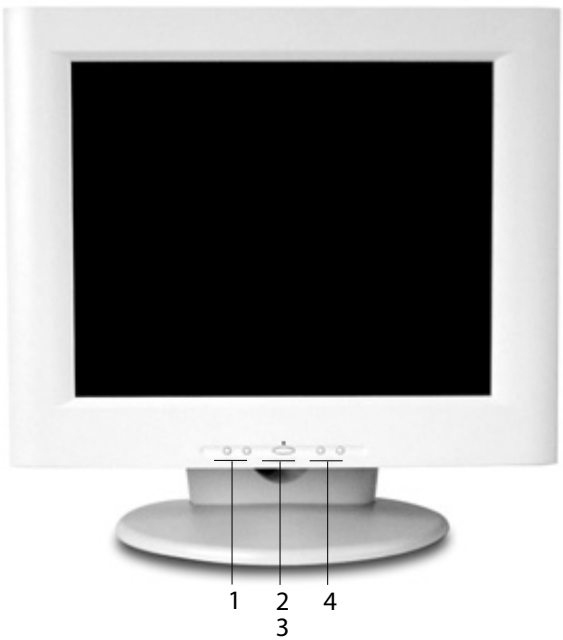
USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Overview of Controls

The onscreen display (OSD) menu is the user interface for controlling various aspects of the VitalScreen display. With it you can adjust functions such as brightness, contrast, language, and horizontal and vertical display position.

Use the push buttons on the front of the display to adjust the controls. Access the OSD menu with a quick press to the Power/Menu button when the display is powered-up. If your computer is in power-saving mode, or is powered-down, the OSD menu is inaccessible.




**Legend**

1 Function LEFT and RIGHT buttons
Select the icons to the left or right.

2 Power ON indicator
Stays lit when the power is on and the display is receiving a proper video signal. It blinks slowly when the display is in power-saving mode.

3 Power/Menu
Turns the display ON or OFF. Press for a minimum of 2 seconds. Activates the OSD main menu with a quick press.

4 Adjust PLUS and MINUS buttons
Change the value of the selected icon.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Hot Key Functions

Three Hot Key functions allow you to make quick adjustments to the display setting, volume, and contrast.

**Auto Adjust.** Press the Function DOWN button to apply a display setting automatically. A small Auto Adjust OSD is also displayed.

**Audio-Volume.** Press the Adjust PLUS button to change the audio volume directly. A small Audio-Volume OSD is also displayed.

**Contrast.** Press the Adjust MINUS button to change the contrast of the display directly. A small contrast OSD is also displayed.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Onscreen Display Main Menu

This screen appears when you access the OSD main menu. The top row of icons represents the main menus. When a menu item is highlighted, its submenu, and a description of the submenu item, appears below the main menu bar.

**Poor image quality?**

Bring up the OSD menu and set the display to its native resolution, refresh rate, and maximum color depth.

Auto adjust the display.

Go to the Windows shutdown screena nd set phase.

Verify that the computer settings are compatible with the display. Check the information on the OSD menu. (See the MISC-Control menu.)

If the problem still exists, call customer support for assistance.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Function Menus

| Monitor–Control Menu | |
|---|---|
| | **Monitor-Control.** Allows you to adjust the display characteristics. Adjust these settings when Auto Adjust results are unsatisfactory.<br>Pressing Adjust PLUS or MINUS displays the Monitor-Control submenu. Use the Function LEFT or RIGHT button to select a submenu item. |
| | **Auto-Adjust.** Select Auto-Adjust to set the display parameters to optimum values. |
| | **H-Position.** Press Adjust PLUS or MINUS to move the display image left or right on a horizontal plane. |
| | **V-Position.** Press Adjust PLUS or MINUS to move the display image up or down on a vertical plane. |
| | **Phase.** Press Adjust PLUS or MINUS to fine-tune the display image. |
| | **Clock.** Press Adjust PLUS or MINUS to adjust the display pixel number alignment. |
| | **Reset.** Press Adjust PLUS or MINUS to reset all the Monitor-Control submenu settings. |
| | **Graph/Text.** Press Function Enter to switch between the text and graphic options. |
| | **Port-Select.** Switch between analog and digital mode; if no signal comes the Auto-Detection function is activated. |
| | **Exit.** Press Adjust PLUS or MINUS to exit the submenu. |

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

| OSD–Control Menu | |
|---|---|
| | **OSD-Control.** Allows you to adjust the position of the onscreen display.<br>Pressing the Adjust PLUS or MINUS button displays the OSD-Control submenu. Use the Function LEFT or RIGHT button to select a sub-menu item. |
| | **OSD-H-Position.** Press the Adjust PLUS or MINUS button to change the position of the OSD on a horizontal plane. |
| | **OSD-V-Position.** Press the Adjust PLUS or MINUS button to change the position of the OSD on a vertical plane. |
| | **OSD-Timer.** Use the Adjust PLUS or MINUS button to change the OSD display time. |
| | **Exit.** Press the Adjust PLUS or MINUS button to exit the OSD-Control submenu. |

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

| Graphic–Control Menu | |
|---|---|
| | **Graphic-Control.** Allows you to adjust the display settings.<br>Pressing Adjust PLUS or MINUS displays the Graphic-Control submenu. Use Function LEFT or RIGHT to select a submenu item. |
| | **Contrast.** Press Adjust PLUS or MINUS to adjust the difference between the lightest and darkest areas of the display screen. You can set the contrast level from 0 to 31. |
| | **Brightness.** Press Adjust PLUS or MINUS to adjust the light level on the screen Make this adjustment in conjunction with Contrast. |
| | **Color.** Press Adjust PLUS or MINUS to select the display color. The available options are 9300, 6500, and User. The 9300 and 6500 options allow you to set the Color Temperature to CIE coordinate value 9300 and 6500 degrees respectively. Selecting the User option allows you to customize the Red, Green, and Blue coordinates. |
| | **R, G, B.** Press Adjust PLUS or MINUS to make individual adjustments to the Red, Green, and Blue coordinates for the customized color temperature. There are 128 levels of adjustments (0 to 127) available. Before adjusting these fields, select the User option in the Color submenu. |
| | **Auto-Level.** Select Auto-Level to automatically set the white balance display. |
| | **Reset.** Press Adjust PLUS or MINUS to reset Color, Brightness, and R, G,B. |
| | **Exit.** Press Adjust PLUS or MINUS to exit the submenu. |

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

| MISC–Control Menu | |
|---|---|
| | **MISC-Control.** Allows you to select the display language, adjust the volume setting, and view system information.<br>Pressing Adjust PLUS or MINUS displays the MISC-Control submenu. Use Function LEFT or RIGHT to select a submenu item. |
| | **Language.** Press Adjust PLUS or MINUS to select a OSD display language. Languages supported: English, German, French, Spanish, and Italian. |
| | **Audio Volume.** Press Adjust PLUS or MINUS to decrease or increase the volume of the stereo speakers. |
| | **Information.** Select this item to see the current display mode and firmware version. |
| | **Exit.** Press Adjust PLUS to exit the submenu. |

| Exit Menu | |
|---|---|
| | **Exit.** Closes the onscreen display program.<br>Pressing Adjust PLUS or MINUS, when the OSD Exit item is selected, exits the OSD menu. The OSD menu also exits when left inactive. |

# Technical Information

| VSS17SX/VSS17SX-TR | Specification | |
|---|---|---|
| Color AMLCD TFT flat-panel unit | 17-inch SXGA (1280 x 1024) | |
| Control Functions Power | Software Power switch with LED indicator (Press to turn OFF, over 1 (one) sec. to turn ON) | |
| Onscreen display (OSD) | Main Menu | Submenu |
| | Auto Adjust | |
| | Monitor Control | Horizontal Position/Vertical Position/Phase/Clock/Reset/Exit |
| | OSD Control | OSD Horizontal Position/OSD Vertical Position/Exit |
| | Misc. Control | Language/Audio Volume/Information/Exit |
| | Graphic Control | Contrast/Brightness/Sharpness/Color/RGB/Exit |
| | Graph/Text | 640 x 400/720 x 400 |
| | OSD Exit | |
| Display area (mm) | 337.92 (W) x 270.34 (H), 17-inch diagonal | |
| Response (Rise/Fall) Time (ms) | 5/20 typ, 10/30 max | |
| Contrast ratio | 350:1 typ (450:1 typical, 250:1 min alternate glass) | |
| Luminance | Non-touch: 260 cd/$m^2$ typ, 200 cd/$m^2$ min; Resistive touch: 208 cd/$m^2$ typ, 160 cd/$m^2$ min | |
| Viewing angle (degrees) | Horizontal (L/R): 75/75 (typ); Vertical (U/D): 65/60 (typ) | |
| Pixel pitch (mm) | 0.264 (H) x 0.264 (W) | |
| Display color | 16.2 M colors | |
| Video interface | Analog | |
| Scanning frequency | Horizontal: 24–80 kHz; Vertical: 55–75 Hz | |
| Number of factory, preset mode | 22 | |
| Power management | Meets VESA DPMS | |
| Power consumption (ON/OFF, Watts) | 50/5.0 max | |
| Dimensions W x H x D (mm) | 404 x 401 x 234 | |
| Net weight (kg) | 4.8 kg with VESA mounting; 8.8 kg with desk stand | |
| Power adapter | 12 volts, 6.67 amps, 80 watts | |
| Options | VESA-compatible mounting plate, desk stand, touch screen | |
| Environment | Operating Temperature: 0° (zero) to 40° Celsius<br>Relative Humidity: 10% to 90%, noncondensing | |
| Audio (Two 2-Watt/channel speakers with amplifier) | Yes | |
| Regulatory | See Regulatory Compliance | |

# Supported Timing

| Item | Standard | Resolution | Dot Clock (MHz) | Vertical Scanning Frequency (Hz) | Horizontal Scanning Frequency (kHz) | Sync Polarity or Composite Sync (H/V) |
|---|---|---|---|---|---|---|
| 1 | NEC PC98 | 640x400 | 25.20 | 70.15 | 31.50 | -/- |
| 2 | NEC PC98 | 640x400 | 21.05 | 56.42 | 24.83 | -/- |
| 3 | MAC 13-inch mode | 640x480 | 30.24 | 66.67 | 35.00 | -/- |
| 4 | MAC 16-inch mode | 832x624 | 57.28 | 74.55 | 49.73 | -/- |
| 5 | MAC 17-inch mode | 1024x768 | 80.00 | 75.02 | 60.24 | -/- |
| 6 | VGA | 640x350 | 25.18 | 70.09 | 31.47 | +/- |
| 7 | VGA | 640x400 | 25.18 | 70.09 | 31.47 | -/+ |
| 8 | VGA | 640x480 | 25.18 | 59.94 | 31.47 | -/- |
| 9 | VESA | 640x480 | 31.50 | 72.81 | 37.86 | -/- |
| 10 | VESA | 640x480 | 31.50 | 75.00 | 37.50 | -/- |
| 11 | VESA | 800x600 | 36.00 | 56.25 | 35.16 | +/+ |
| 12 | SVGA | 800x600 | 40.00 | 60.32 | 37.88 | +/+ |
| 13 | VESA | 800x600 | 50.00 | 72.19 | 48.08 | +/+ |
| 14 | VESA | 800x600 | 49.50 | 75.00 | 46.88 | +/+ |
| 15 | VGA | 720x400 | 28.32 | 70.09 | 31.47 | -/+ |
| 16 | XGA | 1024x768 | 65.00 | 60.00 | 48.36 | -/- |
| 17 | VESA | 1024x768 | 75.00 | 70.07 | 56.48 | -/- |
| 18 | VESA | 1024x768 | 78.75 | 75.03 | 60.02 | +/+ |
| 19 |  | 1024x768 | 71.64 | 66.13 | 53.96 | +/+ |
| 20 | VESA | 1152x864 | 108.00 | 75.00 | 67.50 | +/+ |
| 21 |  | 1152x870 | 100 | 75.06 | 68.68 | -/- |
| 22 | VESA | 1280x960 | 108.0 | 60.0 | 60.0 | +/+ |
| 23 | VESA | 1280x1024 | 108.0 | 60.02 | 63.98 | +/+ |
| 24 | VESA | 1280x1024 | 127.0 | 69.85 | 74.88 | +/+ |
| 25 | VESA | 1280x1024 | 135.0 | 75.03 | 79.98 | +/+ |
| 26 | SUN | 1024x768 | 64.13 | 59.98 | 48.29 | H+V |
| 27 | SUN | 1024x768 | 74.25 | 70.04 | 56.59 | H+V |

# Troubleshooting

| Problem | Solution |
|---|---|
| Display indicates “Over Range”<br><br>The frequency range is out of display specifications, or the incoming resolution is higher than 1280 x 1024. The video data turns off and this warning message appears.<br><br> | Check that the scanning frequency is in a horizontal range of 24 to 80 kHz and a vertical range of 55 to 75 Hz. Or check that the display resolution is set to 1280 x 1024 or lower. |
| Display indicates “No Video”<br><br>There is no video-input signal from the source video port. The OSD shows this message.<br><br> | Check that the video cable is connected securely to the computer and the display. |

# Index

**A**
AC power, connecting 6
Adjust button 3, 11
adjusting display 11
adjusting viewing angle 5
audio line 4

**B**
back panel 4

**C**
cleaning instructions vii
components, identifying 3
connecting
  AC power 6
  stereo speakers 8
  touch screen 9
  VGA cable 7
controls, display 11
customer support 23

**D**
desk stand 3
DIN connector 4
display
  adjusting 11
  back panel 4
  cleaning vii
  controls, menu 11
  front panel 3
  installing 6
  setup 2
  troubleshooting 20
  unpacking 2
  viewing angle, adjusting 5
DPMS 10

**E**
enclosure, cleaning vii
Exit menu 17

**F**
front panel 3
Function buttons 3, 11

**G**
Graphic-Control menu 16

**I**
identifying components 3
information
  ordering parts 26
  product vi
  technical 18
installing display 6

**L**
LCD screen 3
  cleaning vii
  troubleshooting 20

**M**
menu
  Exit 17
  Graphic-Control 16
  main, onscreen display 14
  MISC-Control 17
  Monitor-Control 14
  OSD-Control 15
MISC-Control menu 17
Monitor-Control menu 14

**O**
onscreen display (OSD) menu 14
ordering parts 26
orientation, screen 5
OSD-Control menu 15

**P**
power
  indicator 3, 11
  management system 10
  switch 3, 11
product information vi

**R**
repair 23
rotation 5
RS232 connector 4

**S**
safety instructions vi
screen orientation 5
selecting workspace 2
stereo speakers 4, 8
supported timing 19

**T**
technical information 18
timing, supported 19
touch screen
  cleaning vii
  connecting 9
troubleshooting 20

**U**
unpacking display 2

**V**
VESA DPMS 10
VGA
  cable, connecting 7
  connector 4
viewing angle, adjusting 5

**W**
warranty 23
workspace, selecting 2

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Overview of Standard Warranty

## Summary

- Standard 1-year “repair and return” warranty on all VitalScreen displays
- Typical repair turnaround time of 10 business days
- Repair facilities and technical support in the United States and in Europe

## Standard Warranty Return Procedure

As a Planar Standard Warranty customer, you must follow the procedure below if you have a non-functioning 17" VitalScreen S display. Planar customer service staff will attempt to correct any minor issues that may be causing the problem. Once Planar has determined that you have a non-functioning product, Planar will arrange for return and repair of the non-functioning product.

1. Contact Planar via the web at http://www.planar.com/support. In North America, call (866) PLANAR1 (866.752.6271). In Europe, call +358 9 420 01 or send your info by fax to +358 9 420 0200. You must have the model number, serial number, and proof-of-purchase available.
2. Planar customer service staff will attempt to correct any minor issues that may be causing the problem. If we are unable to correct the problem to your satisfaction, we will issue a Return Material Authorization (RMA).
3. You must return the product, as specified, to Planar Systems. Do not return the battery cell or cart to planar Systems unless directed by Planar customer service.
4. Planar will validate the defect, repair the unit, and return the unit to you. The typical turnaround time is 10 business days.

At its sole discretion, Planar may charge you the customer for returned units deemed functional or for returned units with only customer-caused damage. It is the responsibility of the customer to properly package the hardware, include all appropriate materials, and return it to the location specified by Planar customer service.

MORE

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

## Summary Limitations and Exclusions of VitalScreen Displays

1. Warranty is valid only for the first consumer purchaser (non-transferable).
2. Warranty does not cover the battery cell(s), mouse, or keyboard.
3. The customer must provide original proofs of purchase for the hardware.
4. Warranty is void on any product with a defaced, modified, or removed serial number.
5. Warranty is void on any product with damage, deterioration, or malfunction resulting from the following:
   a) Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
   b) Repair or attempted repair by anyone not authorized by Planar.
   c) Any damage of the product due to shipment.
   d) Removal or installation of the product.
   e) Causes external to the product, such as electric power fluctuations or failure.
   f) Use of supplies or parts not meeting Planar specifications.
   g) Normal wear and tear, including backlights dimming over time.
   h) Any other cause which does not relate to a product defect.
6. Warranty excludes removal, installation, and setup service charges.

## Limitation of Implied Warranties

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION CONTAINED HEREIN INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

MORE

## Exclusion of Damages

THE LIABILITY OF PLANAR IS LIMITED TO THE COST OF REPAIR OR REPLACEMENT OF THE PRODUCT. PLANAR SHALL NOT BE LIABLE FOR THE FOLLOWING:

1. DAMAGE TO OTHER PROPERTY CAUSED BY ANY DEFECTS IN THE PRODUCT, DAMAGES BASED UPON INCONVENIENCE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, LOSS OF PROFITS, LOSS OF BUSINESS OPPORTUNITY, LOSS OF GOODWILL, INTERFERENCE WITH BUSINESS RELATIONSHIPS, OR OTHER COMMERCIAL LOSS, EVEN IF ADVISED OF THEIR POSSIBILITY OF SUCH DAMAGES.
2. ANY OTHER DAMAGES, WHETHER INCIDENTAL, INDIRECT, CONSEQUENTIAL, OR OTHERWISE.
3. ANY CLAIM AGAINST THE CUSTOMER BY ANY OTHER PARTY.

## Effect of Local Law

This warranty gives you specific legal rights, and you may have other rights, which vary from locality to locality. Some localities do not allow limitations on implied warranties and/or do not allow the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

QUICK LINKS
Contents
Index
Ordering Parts
Product Information
Regulatory Compliance
Warranty

GETTING STARTED
About the Display
Unpack Display
Identify Components
Adjust Orientation/View

INSTALLING THE DISPLAY
Connect Power
Connect Video
Connect Audio
Connect Touch Screen
Power Management System

USING THE CONTROLS
Overview
Hot Key Functions
OSD Menu
Function Menus

APPENDIXES
Technical Information
Supported Timing
Troubleshooting

# Ordering Information

## Non-touch display

| VSS17SX Display | Part Number |
|---|---|
| VSS 17SX 17-inch SXGA VitalScreen S Medically Certified Display with desk stand and US power cord | 997-2727-00 |
| VSS 17SX 17-inch SXGA VitalScreen S Medically Certified Display with desk stand and European power cord | 997-2727-01 |
| VSS 17SX 17-inch SXGA VitalScreen S Medically Certified Display with VESA mounting plate and US power cord | 997-2727-02 |
| VSS 17SX 17-inch SXGA VitalScreen S Medically Certified Display with VESA mounting plate and European power cord | 997-2727-03 |

| VSS17SX Part | Part Number |
|---|---|
| US power cord | 903-0169-00 |
| European power cord | 903-0251-00 |
| VGA-VGA-audio cable (integrated), 2 m | 903-0293-00 |
| Desk stand | 501-0380-00 |
| Universal plate | 501-0415-00 |
| Power adapter | 902-0038-01 |

## Resistive-touch display

| VSS17SX-TR Display | Part Number |
|---|---|
| VSS 17SX-TR 17-inch SXGA VitalScreen S Medically Certified Display with desk stand and US power cord | 997-2728-00 |
| VSS 17SX-TR 17-inch SXGA VitalScreen S Medically Certified Display with desk stand and European power cord | 997-2728-01 |
| VSS 17SX-TR 17-inch SXGA VitalScreen S Medically Certified Display with VESA mounting plate and US power cord | 997-2728-02 |
| VSS 17SX-TR 17-inch SXGA VitalScreen S Medically Certified Display with VESA mounting plate and European power cord | 997-2728-03 |

| VSS17SX-TR Part | Part Number |
|---|---|
| US power cord | 903-0169-00 |
| European power cord | 903-0251-00 |
| VGA-VGA-audio cable (integrated), 2 m | 903-0293-00 |
| Desk stand | 501-0380-00 |
| Universal plate | 501-0415-00 |
| Serial cable, F/M | 903-0233-00 |
| Serial cable, M/M | 903-0233-01 |
| Power adapter | 902-0038-01 |